

## VALIDATION OF A SCIENTIFIC NAME FOR THE TAHITIAN LIME

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### ABSTRACT

The name *Citrus latifolia* Tanaka, commonly used for the economically important Tahitian lime, is found to have been invalidly published, without a Latin description or citation of any basionym. Likewise, publications referring to a presumed basionym, *C. aurantiifolia* (Christm.) Swingle var. *latifolia* Tanaka ex Yu. Tanaka, do not effect valid publication for that entity nor reference to any synonym that could be used. A diagnosis and type citation are here provided to validate a scientific name for the Tahitian lime, *Citrus ×latifolia* Tanaka ex Q. Jiménez.

**KEY WORDS:** *Citrus latifolia*, limón mesino, Persian lime, Rutaceae, Tahitian lime.

*Citrus ×latifolia* Tanaka is the name in current use for a species of economic importance commonly known in the English-speaking world as the Persian or Tahitian lime (see, e.g., Mabberley, 2008). However, in the process of editing the Rutaceae treatment for the *Manual de Plantas de Costa Rica*, we have found that *C. latifolia* Tanaka (1951: 140), often cited as *C. latifolia* (Tanaka ex Yu. Tanaka) Tanaka, was published without a Latin description or mention of any basionym and, as such, is invalid and cannot be considered as either a new taxon name or a new combination.

The oft-cited parenthetical authorship refers to a presumed basionym, *Citrus aurantiifolia* (Christm.) Swingle var. *latifolia* Tanaka ex Yu. Tanaka (1948). The ostensible protologue of the varietal name includes extensive Japanese text, a detailed illustration, and a bibliography, but apart from binomials and trinomials, no Latin, which was required at the time (validation by means of illustrations was only permitted before 1908; see McNeill et al., 2006: Art. 42.3). Tanaka (1948: 57, 60) cited a specific page in Tanaka (1938), which act could conceivably have resulted in the validation of the name, but the last-mentioned paper also includes no Latin text, merely the name “*Citrus aurantifolia* Swingle var. *latifolia* Tanaka” in a skeletal list, with a few Japanese characters.

Consulting all the other references we could track down that might contain or lead to a validly published version of either of these names (e.g., Tanaka 1932, 1939), we came up empty-handed. Furthermore, we know of no synonym that could be used in place of *Citrus ×latifolia*. Therefore, in order to provide a valid name for a species of *Citrus* to be treated in the *Manual de Plantas de Costa Rica* and which is an important commercial crop in Costa Rica (where it is commonly known as limón mesino or limón persa) and many other parts of the world, we here provide a diagnosis and cite a type specimen for *Citrus ×latifolia* (now generally acknowledged as a hybrid involving *C. ×aurantiifolia*), the name first used by Tyôzaburô Tanaka (1885–1976):



**CITRUS ×LATIFOLIA** Tanaka ex Q. Jiménez, **sp. nov.** **TYPE: COSTA RICA.** **Heredia:** Cantón de Santo Domingo. Dto. Tures. Calle La Rinconada, en cafetales y lotes por el Río Tures, 9° 60' N, 84° 04' W, 1200 m, 20 Feb 2006, *B. Hammel & I. Pérez 24125* (holotype: MO; isotypes: CR, INB). Figures 1–3.

Similar to *Citrus ×aurantiifolia* (Christm.) Swingle (Key lime, lime, limón criollo, etc.) but differing by its lack or near lack of thorns and larger fruits (5.5–8 × 6–7.5 cm, vs. 4–6 × 4–5 cm) with a thicker rind (3–7 mm, vs. 1–3 mm), lacking seeds, and with less acidic, non-bitter juice.



Figure 1. *Citrus ×latifolia*. Close-up of flowering branch showing buds, open flower, and young fruit (*Hammel & Pérez 24125*); inset showing spines and leaf bases. Scale bar = 2 cm.





Figure 2. *Citrus ×latifolia*. Flowering and fruiting branches, with fruit sliced longitudinally (Hammel & Pérez 24125); inset showing glandular dots (largest ca. 0.3 mm diam.). Scale bar = 5 cm.





Figure 3. *Citrus x latifolia*. Fruiting branch on tree (Hammel & Pérez 24125). Scale bar = 5 cm.



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